



Appn. NO. 09/858,012
Grp./A.U.: 3727

17/E
K. Gaby
11/20/03
N.E

CLAIM AMENDMENTS TO ACCOMPANY RCE

Claim 1-117 (canceled)

Claim 118 (non-existent, error in the final OA sent 8/08/03)

Claim 119 (previously presented, to be entered): A main frame of a customizing pack carrier that can be integrated into different wheeled bases for transporting any commercially available non-customized pack, said pack having a top attachment, a left attachment, and a right attachment, said main frame comprising:

- a) a frame face of size and shape adapted to have said pack secured thereon,
- b) wherein said frame face has a top frame edge, a left frame edge, and a right frame edge,
- c) a first releasable retaining means disposed proximal to said top frame edge for releasably securing said top attachment,
- d) a second releasable retaining means disposed proximal to the lower half of said left frame edge for securing said left attachment,
- e) a third releasable retaining means disposed proximal to the lower half of said right frame edge for securing said right attachment,
- f) wherein the second and third releasable means are selected from a group consisting of:
 - a) hook 122 or equivalent,
 - b) cleat 316 or equivalent,
 - c) cleats 1044 or 1045 or equivalent,

whereby when said main frame is integrated into a wheeled vehicle like a bike, a scooter or a base with ground casters, a very effective and attractive alternative means of transporting ordinary non-customized packs is provided.

RECEIVED
NOV 14 2003
TECHNOLOGY CENTER R3700

Claim 120 (previously presented, to be entered): The main frame in Claim 119 further including means to adjustably dispose the second and third releasable retaining means apart from said first releasable retaining means whereby the retaining means can be made to approximate the location of the attachments on said pack.

Claim 121 (previously presented, to be entered): The main frame in claim 119 wherein said first releasable retaining means is selected from a group consisting of:

- a) rotary transmission means comprising a protrusion where a strap-like attachment part affixed on a pack can be wound around, wherein said protrusion is part of a user-controlled rotational segment whose rotation causes said strap-like attachment part to draw said pack closer towards said main frame as is necessary after which rotation is deterred,
 - b) clamping means comprising:
 - a) at least one clamp of size capable of enclosing at least one strap of said pack, said strap having a topside and an underside,
 - b) adjusting means to increase or decrease clamping pressure on said strap,
 - c) hook 122 or equivalent,
 - d) cleat 316 or equivalent,
 - e) other fastening ware including hooks, ring, snap hooks, buckles, press-release buckles, clips, latches, buttons, hook and loop fasteners, ratchets,
 - f) fixed knobs, protrusions, slits, and cavities,
- whereby the selection of retaining means includes not only those conveniently adaptable to directly mate with strap-like and looped attachment means affixed on a pack but also includes those commercially available mating fasteners with one mating member mounted on the frame and the other member affixed on the pack.

Claim 122 (previously presented, to be entered): The main frame in claim 121 wherein the rotation of said protrusion in selection (a) is deterred and allowed by means selected from a group consisting of:

- a) rotating a member of said segment clockwise or counterclockwise about an axis normal to the direction of its strap-drawing rotation, wherein said clockwise

rotation of said member increases contact between a member of said rotational segment and a section of said frame so that rotation is deterred, wherein said counter-clockwise rotation of said member decreases or eliminates said contact so that said rotation can proceed,

- b) pushing down or pulling up a member of said segment wherein pushing down said member increases contact between a member of said rotational segment and a section of said frame so that said rotation is deterred, wherein said pulling up of said member decreases or eliminates said contact so that said rotation can proceed, and
- c) sliding a controlling switch towards an off or an on position, wherein said switch is connected to another member that can directly block movement of the user-controlled rotational segment,

whereby users can readily relate to the above means as the normal conventional ways of tightening or loosening connections between things.

Claim 123 (previously presented, to be entered): The main frame of claim 122 wherein said rotational segment in (c) contains a ratchet mechanism that defines direction of rotation of said segment, wherein said ratchet mechanism operates through alternating, bi-directional motions imparted by a user on an accessible handle grip, wherein movement of said grip can be allowed and deterred.

Claim 124 (previously presented, to be entered): The main frame in claim 121 wherein said clamp in selection (b) comprises:

- a) a top clamping block held by and slidably related in an up and down fashion to said face of said main frame wherein said top clamping block has an underside surface for bounding the topside of said strap,
- b) a bottom clamp mate having a topside facing opposite the underside of said top clamping block for bounding the underside of said strap, wherein said bottom clamp has a hinge connection on one end to said main frame and a releasable connection on the opposite end also to said main frame.

Claim 125 (previously presented, to be entered): The main frame in claim 124 wherein said adjusting means in selection (b) of claim 121 is selected from a group consisting of:

- a) an adjusting member of said face capable of exerting pressure when urged toward said top clamping block thereby causing the underside of said block to slide normally toward the facing stationary topside surface of said bottom clamping mate, wherein said pressure is decreased when said adjusting member is urged away from said top clamping block thereby causing the underside of said block to move normally away from the facing topside surface of said bottom clamping mate,
- b) the following provisions:
 - a) wherein said clamp have dimensions designed to set the space between the underside surface of said top clamping block and the topside surface of said bottom clamp mate initially at close to nothing,
 - b) compressive springs disposed normally between the topside of said clamping block and said face of said frame held in place by extensions on said face that retract into said topside of said clamping block when the springs are compressed,

whereby the presence of straps directly exerts normal forces onto the adjacent underside of said top clamping block and consequently onto said compressive springs, whereby the resisting compressive forces exerted by said springs allow the topside and underside surfaces to maintain a snug grip on said strap.

Claim 126 (previously presented, to be entered): The main frame in claim 121 wherein said clamp in selection (b) comprises:

- a) a member on said frame face having an underside for bounding the topside of said strap,
- b) a bottom clamp mate having a topside facing opposite said underside of said member for bounding the underside of said strap,
- c) wherein said clamp mate has a hinge connection on one end to a hinge housing and a releasable connection to a closure on the opposite end,

- d) wherein said hinge housing and said closure are both held by and slidably related in an up and down fashion to said frame face,
- e) a first compression spring dimensionally capable of receiving a top section of said hinge housing,
- f) a second compression spring dimensionally capable of receiving a top section of said closure,
- g) wherein the bottom ends of said first and second compression springs are supported by said frame face,
- h) wherein the top ends of said first compression spring and said second compression spring are bordered by a stopper member on said hinge housing and a stopper member on said closure respectively,
whereby the presence of straps exerts normal forces onto adjacent surfaces including the topside of said bottom clamp mate and consequently onto said first and second compressive springs by virtue of the stopper member bordering the top ends of the springs.

Claim 127 (previously presented, to be entered): The main frame in claim 121 wherein said clamp in selection (b) comprise:

- a) a small flat type spring held on said frame face comprising one of more waves having an underside for bounding said topside of said strap,
- b) a bottom clamp mate having a topside facing opposite the underside of said flat-type spring for bounding the underside of said strap,
- c) hinge connection affixed to said frame face,
- d) closure connection affixed to said face a predetermined distance from said hinge housing,
- e) wherein one end of said bottom clamp mate is attached to said hinge means,
- f) wherein the other end of said bottom clamp mate is releasably connected to said closure means,
- g) wherein one end of said flat-type spring is slidably anchored within borders of said hinge connection and the other is slidably anchored within borders of said closure connection,

6

whereby the presence of straps directly exerts normal forces onto the adjacent underside of said flat-type spring.

Claim 128 (previously presented, to be entered): The main frame in claim 119 wherein said frame face comprises a pair of elongated members spaced apart from each other by a base mounted to the bottom ends of said pair and by at least one transverse bar above said base wherein one of said transverse bars is said top frame edge.

Claim 129 (previously presented, to be entered): The main frame in claim 128 wherein said elongated members are spaced parallel to each other and comprise a plurality of tubes each having predetermined longitudinal cross-sectional dimensions nested together and capable of being extended and retained in the extended position by some means.

Claim 130 (previously presented, to be entered): The main frame in claim 129 wherein the nested tubes comprise a pair of nested tube assemblies, each nested tube assembly comprising a small tube receivable inside a larger tube, wherein the pair of larger tubes is joined to each other toward its upper end by one of said transverse bars that is the top frame edge, wherein the pair of smaller tubes is joined to each other on top by another one of said transverse bars.

Claim 131 (previously presented, to be entered): The main frame in claim 129 wherein the nested tubes comprise a pair of nested tube assemblies, each assembly comprising a third largest tube receivable inside a second largest tube receivable inside a largest tube wherein one end of the pair of largest tubes is mounted on said base, wherein the pair of third largest tubes is joined to each other on top by one of said transverse bars, wherein the pair of second largest tubes is joined to each other toward its upper end by another one of said transverse bars that is the top frame edge, whereby the adjustable relationship between the largest and second largest pair of nesting tubes allows said main frame to be used for pack of different heights.

Claim 132 (previously presented, to be entered): The main frame in claim 129 further including means to allow at least one pair of tubes to have a quasi-permanent extendible length, whereby users of substantially differing heights are accommodated by the same main frame without the hassle of adjusting the main frame each time it is extended.

Claim 133 (previously presented, to be entered): The main frame in claim 129 wherein said plurality of tubes comprise a pair of nested tube assemblies, each assembly comprising at least two tubes each having a tapering cross-section whereby the tapered form obviates the use of top and bottom tube components for retaining the tubes with each other.

Claim 134 (previously presented, to be entered): The main frame in claim 129 wherein said means of extending and retaining positions of a nested tube assembly comprising two tubes comprise:

- a) providing an inner tube nested within an outer tube,
- b) wherein said inner tube has an aperture near one end and wherein said outer tube has a series of apertures along its length,
- c) providing a snap button disposed inside said inner tube of said pair of nesting tubes, wherein said snap button has a positioning member, wherein said positioning member is engaged in said aperture on said inner tube and further capable of engaging into another aperture on said outer tube of said pair of nesting tubes,
- d) providing a catching extension of predetermined shape and dimension behind said positioning member, so that said extension can latch on to another bumper structure of shape and dimension determined in conjunction with those of said catching extension,
- e) providing reinforced anchoring means for said snap button to eliminate the possibility of displacement when said positioning member is depressed for an extended time,

- f) providing a third elongated member dimensionally receivable inside said inner tube, said elongated member having a bottom terminal containing said bumper structure,
 - g) delivering said third elongated member into said inner tube to reach a maintained position where its said bumper structure is capable of holding onto said catch extension when said extension is introduced,
 - h) introducing said catch extension by pressing said positioning member of said snap button inward until the extension latches onto said bumper structure,
 - i) moving the inner and outer tubes relative to each other until the desired position is reached,
 - j) withdrawing said third elongated member from said inner tube to release said bumper structure from said catch extension,
 - k) finely adjusting the positions of the inner and outer tubes relative to each other until said positioning member becomes engaged into the nearest aperture on said outer tube,
- whereby when said means is applied to an extendible unit with a plurality of tubular columns each of which having at least two tubular nesting tubes that can only be extended if done simultaneously as by lifting a transverse bar connecting their top terminals like that required of a telescoping pack carrier, easily enables only one person with at least one hand to perform height adjustments.

Claim 135 (previously presented, to be entered): The main frame in claim 133 wherein the combination of said catch extension and said bumper structure is selected from a group consisting of:

- a) catch 54-2 and bumper 64-2 or their equivalents,
- b) catch 290 and bumper 289 or their equivalents, and
- c) catch 292 and bumper 292 or their equivalents.

Claim 136 (previously presented, to be entered): The main frame in claim 119 wherein said main frame comprises a single column having:

- a) at least one arm of length about the width of a pack, said arm centrally and rotatably arranged cross-wise on the lower end of said column,
- b) wherein the right and left terminals of said arm are the said right frame edge and the said left frame edge respectively,
- c) wherein the upper end of said column is the top frame edge, and
- d) means to anchor said arm parallel-wise onto said column when not in use, whereby a single column frame further equipped with wheel means makes for a more compact carrier and can also be adapted for use on a scooter.

Claim 137 (previously presented, to be entered): The main frame in claim 135 wherein said length is apportioned between two shorter arms, one end of each of said shorter arms emanate laterally from opposite sides of the lower end of said column, the other end rotatably anchored onto the lower end of said column, wherein said short arms are each rotatably urged up towards said column and retained in place by some means when not in use.

Claim 138 (previously presented, to be entered): The main frame in claim 119 further including behind said frame face a plurality of extensions for adapting and mounting to a wheeled support.

Claim 139 (previously presented, to be entered): The main frame in claim 119 further including a supporting base comprising:

- a) a base frame of size adapted to supporting the bottom of said pack, said base frame having an underside,
- b) wherein said base frame is connected to the lower end of said main frame by some first means, and
- c) a plurality of extensions from said underside of said base frame for adapting and mounting to a wheeled support.

Claim 140 (previously presented, to be entered): The main frame and supporting base combination in claim 139 wherein said main frame is mounted rotatably by some second

means between a position normal to said supporting base and a position folded onto said supporting base, further including means to retain said main frame in said normal and folded positions, whereby when said wheeled support is a bike, the resulting bike pack carrier can carry said pack upright or horizontally, and whereby when said wheeled support are casters, said folding option allows for compact storage of said combination.

Claim 141 (previously presented, to be entered): The main frame in claim 119 further including a supporting base comprising:

- a) a base frame of size adapted to supporting the bottom of said pack,
- b) wherein said base frame comprises a front section and a back section that are slidably related by some third means,
- c) wherein said front section has a front edge,
- d) wherein said back section is connected to the lower end of said main frame by some fourth means,

whereby the base can conform to the depth of the loaded pack and therefore stabilize it.

Claim 142 (previously presented, to be entered): The main frame in claim 120 wherein said means to adjustably dispose said top frame edge apart from the lower half of the right and left frame edges is selected from a group consisting of:

- a) providing a structure comprising:
 - a) a first face member and a second face member,
 - b) wherein said first face member and said second member are adjacent each other and are slidably related,
 - c) wherein at least one of the first, second and third retaining means is disposed on at least one of the first and second face members,
 - d) wherein said first face member has a main aperture,
 - e) a snap button internally mounted to said first face member,
 - f) wherein said snap button has a position head exposed outwardly through said main aperture,

- g) wherein said second face member has a plurality of secondary apertures along its length,
 - h) wherein said secondary apertures are vertically aligned adjacent said positioning head,
whereby the adjustment is accomplished by urging inwardly said positioning head out of any said secondary aperture and sliding the first and second face members relative to each other until the desired secondary aperture is aligned with said positioning head,
- b) providing a structure comprising:
- a) a first face member and a second face member adjacent each other and slidably related,
 - b) wherein at least one of the first, second and third retaining means is disposed on at least one of the first and second face members,
 - c) wherein said second face member has a hole,
 - d) a spring button or equivalent anchoring means mounted externally to said second face member,
 - e) wherein said spring button has a positioning head capable of engaging inwardly through said main aperture and of being manipulated from behind,
 - f) wherein said first face member has a plurality of secondary holes aligned vertically along its length and disposed adjacent said positioning head,
whereby the adjustment is accomplished by urging outwardly said positioning head out of any said secondary aperture and sliding first and second face members relative to each other,
- c) providing a structure comprising:
- a) a first face member and a second face member adjacent each other and slidably related,
 - b) wherein at least one of the first, second and third retaining means is disposed on at least one of the first and second face members,

- c) a lopsided friction knob mounted on said second face member,
- d) wherein said second face member has a window,
- e) wherein said friction knob has a head,
- f) wherein said head is communicable to said first face member through said window,

whereby the friction between the friction knob head and outer walls of said first member maintains the position of two slidable members relative to each other,

- d) providing a structure comprising:

- a) a first face member and a second face member, both slidably related,
- b) wherein at least one of said first, second and third retaining means is disposed on at least one of said first face member and said second face member,

whereby the connections between the retaining means and the attachment parts of said pack and the rigidity of said pack maintains the relative positions between the two slidable members,

- e) further including additional retaining means at different levels of said left lower half frame edge and said right lower half frame edge upwardly approaching said top frame edge, whereby the addition of more attachment points even if only three are used at a time obviates the need for adjusting the location of said first retaining means relative to the first and second retaining means,
- f) further including additional retaining means at different levels of said top frame edge downwardly approaching the right and left lower half frame edges,
- g) providing a structure comprising:
 - a) a main first tubular member with threaded outside walls,
 - b) an adjusting ring with threaded inner walls,

- c) wherein said threaded outside walls mate with said threaded inner walls,
- d) a supporting connector having a tubular terminal received outside said first tubular member,
- e) wherein a said first retaining means is disposed on said supporting connector,
- f) wherein said tubular terminal contain a side window into an inner cavity,
- g) wherein said adjusting ring is disposed inside said inner cavity, whereby the location of the tubular terminal and consequently the retaining means is defined by the position of said adjusting ring, said position being attained by threading through said side window said ring up or down said first tubular member,
- h) providing a structure comprising:
 - a) a main first tubular member with threaded outside walls,
 - b) a pair of adjusting rings with threaded inner walls,
 - c) wherein said threaded outside walls mate with said threaded inner walls,
 - d) a supporting connector having a tubular terminal received outside said first tubular member,
 - e) wherein a said first retaining means is disposed on said supporting connector,
 - f) wherein said adjusting rings each border the top and bottom of said tubular terminal,
 whereby the positions of the pair of adjusting rings consequently define the location of the retaining means.

Claim 143 (previously presented, to be entered): A main frame and supporting base combination in claim 141 wherein said front section has a topside extension proximal to said front edge whereby sliding said back section and said front section apart from or closer to each other as needed stabilizes the loaded carrier.

Claim 144 (previously presented, to be entered): The main frame and supporting base combination of claim 143 wherein said third means to slidably relate said back section and said front section is selected from a group consisting of:

- A. a) providing a back right cavity and a back left cavity for said back section,
 - b) providing a front right cavity and front left cavity for said front section,
 - c) wherein said back right cavity connects to said front right cavity and runs continuously from a back right terminal to a front right terminal substantially on the right side of said base frame,
 - e) wherein said back left cavity connects to said front left cavity and runs continuously from a back left terminal to a front left terminal substantially on the left side of said base frame,
 - f) wherein all the back and front terminals are equipped with anchoring rods or equivalent anchoring means,
 - g) an elongated right elastic member and an elongated left elastic member,
 - h) wherein one end of said right elastic member is anchored to the anchoring means on said back right terminal,
 - i) wherein the other end of said right elastic member is anchored to the anchoring means on said front right terminal,
 - j) wherein one end of said left elastic member is anchored to the anchoring means on said back left terminal, and
 - k) wherein the other end of said left elastic member is anchored to the anchoring means on said front left terminal,
whereby pressure from the load directed normally toward said topside extension automatically draws out said front section thereby stabilizing the load at all times,
- B. a) providing one of the sections with at least one substantially front-ward directed series of wavy indentations, each indentation having a crest and a trough,
- b) providing the other section with at least one flexing button comprising:

- a) a button head with a smoothly curved side and straight side opposite each other,
- b) an elongated section or neck extending substantially in the same general direction as said series of wavy indentations and capable of being lodged into any of the troughs,
- c) providing the said other section in (b) a separate rigid control member with one side disposed adjacent the straight side of said button head having a control contact protrusion terminating in a straight surface slidably related against said straight side of said button head, and
- d) wherein said rigid control member is externally controlled by some means to freely and fixedly lodge and dislodge said button from said trough of one of the indentations,

whereby said back section and said front section are free to slide past each other when said button head is freely able to dislodge from any indentation thereby allowing said base frame to be adjusted as needed to the depth of the load.

C. a) providing one of the sections with at least one substantially front-ward directed series of wavy indentations, each indentation having a crest and a trough,

b) providing the other of the sections with the following:

- a) at least one flexing button having a smoothly curved button head fixedly connected by an elongated member to a user-controlled box,
- b) a smoothly curved channel lodging said flexing button and said elongated member,
- c) an elastic member or spring disposed inside a cavity wherein said elastic member is compressible by said user-controlled box,

c) wherein said back and front sections are arranged such that said button head is capable of lodging into any of the troughs ,

whereby said flexing button and said elongated member is retracted along said smoothly curved channel as said user-controlled box is pulled toward said elastic member rendering both sections free to slide past each other.

Claim 146 (previously presented, to be entered): A main frame and base combination in claim 139 further including

- a) a fifth means for inclining said main frame frontward, said fifth means selected from a group consisting of:
 - a) providing for collapsible front support members,
 - b) providing fixable hinged connection between said base frame and said main frame, and
 - c) providing base support members of predetermined shape to allow rocking or rotational motion in conjunction with reinforced connection between said main frame and said base frame,
 - b) provisions for a seat comprising:
 - a) a first sheet of material of sufficient size for use as said seat and to be retained by some sixth means behind a load on said carrier when not in use, and
 - b) a seventh means for attaching said seat onto said main frame and base combination,
- whereby the combination can be transformed into a backrest with seat even without unloading the pack from the carrier.

Claim 147 (previously presented, to be entered): The main frame and base combination in claim 146 wherein said fixable hinged connection between said base frame and said main frame comprises:

- a) the following on one part of said fixable hinged connection:
 - a) a circular hub having a normal centrally disposed cylindrical pin frame and a side window, said pin frame defining the axis of rotation of said hinged connection,
 - b) a spring biased plug 189L or 189L' or equivalent retained normally and rotatably on said pin frame in said hub by a compression spring, said plug having a locking member on one side and a button on one end, said button dimensionally receivable into said side window of said hub,
- b) the following on the other part of said fixable hinged connection:

- a) a circular central recess having a central aperture for receiving an axis pin, said recess of size capable of receiving the rotating span of said locking member of said plug when said button of said plug is depressed,
- b) notches or recess extensions on the perimeter of said central recess, each capable of mating with said locking member when said button is not in its depressed position, wherein each notch corresponds to a specific relative position between said base frame and said main frame, and
- c) a hinge pin going through said pin frame and through said central aperture on said central recess, said pin being capped in place at both ends,

whereby given the above provision, operating said fixable hinge connection comprise depressing and maintaining depressed position of said button of said plug disposed outside said side window of said hub and urging one part of said hinge connection to rotate past the other part until the desired relative position of both parts is reached after which pressure on said button is released and said locking tooth locks into position inside one of said recess extension, whereby the operation is easy, quick, flexible and lockable in the inclined and fully folded positions.

Claim 148 (new) A method of releasably securing a backpack, said backpack having a back face, top handle and left and right shoulder straps with flexible lower portions, to a main frame of a pack carrier comprising:

- a) providing a main frame of size capable of supporting the back face of a backpack, and
- b) providing the main frame with a right retaining means disposed proximal the bottom right corner of the main frame, and
- c) providing the main frame with a left retaining means disposed proximal the bottom left corner of the main frame, and

- d) providing the main frame with a top retaining means disposed proximal the top edge of the main frame, and
- e) securing the top handle onto the top retaining means, and
- f) securing the flexible lower portion of the right shoulder strap of the backpack onto said right retaining means, and
- g) securing the flexible lower portion of the left shoulder strap of the backpack onto said left retaining means, and
- h) wherein the method of securing the flexible lower portions is selected from a group consisting of the following and their equivalents:
 - 1.) providing at least one protrusion or equivalent to each of the flexible straps and slinging the strap onto their respective left and right retaining means, the protrusion abutting movement of each of the straps in at least one direction, and
 - 2.) providing a ring or equivalent to each of the flexible straps and slinging the ring onto their respective left and right retaining means, the ring abutting movement of each of the straps, and
 - 3.) directly winding the flexible straps around their respective left and right retaining means,
- i) wherein the method of securing the top handle is selected from a group consisting of the following and their equivalents:

- 1.) hanging said top handle onto said top retaining means,
 - 2.) winding said top handle onto said top retaining means,
 - 3.) clamping said top handle onto said top retaining means,
- j) wherein the method of releasing the retained straps comprise the reverse of the securing process.